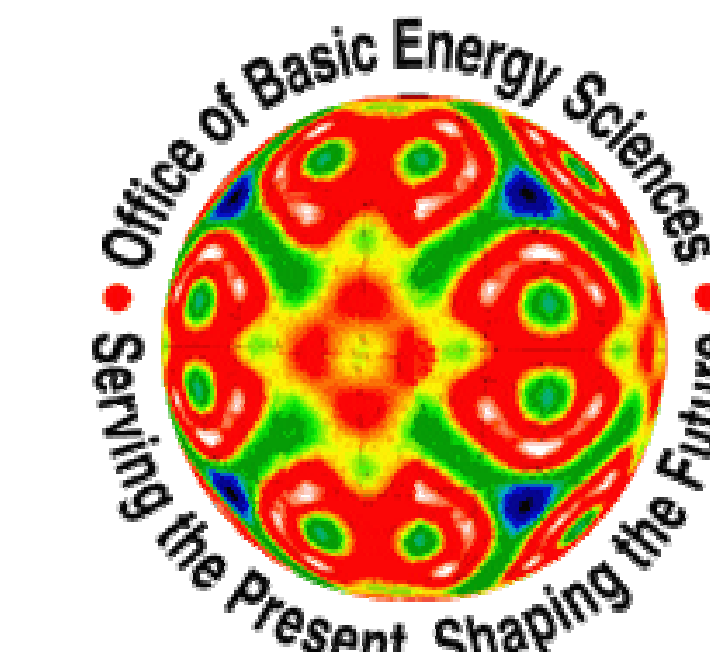




Center for Integrated Nanotechnologies (CINT)

"One scientific community focused on nanoscience integration"

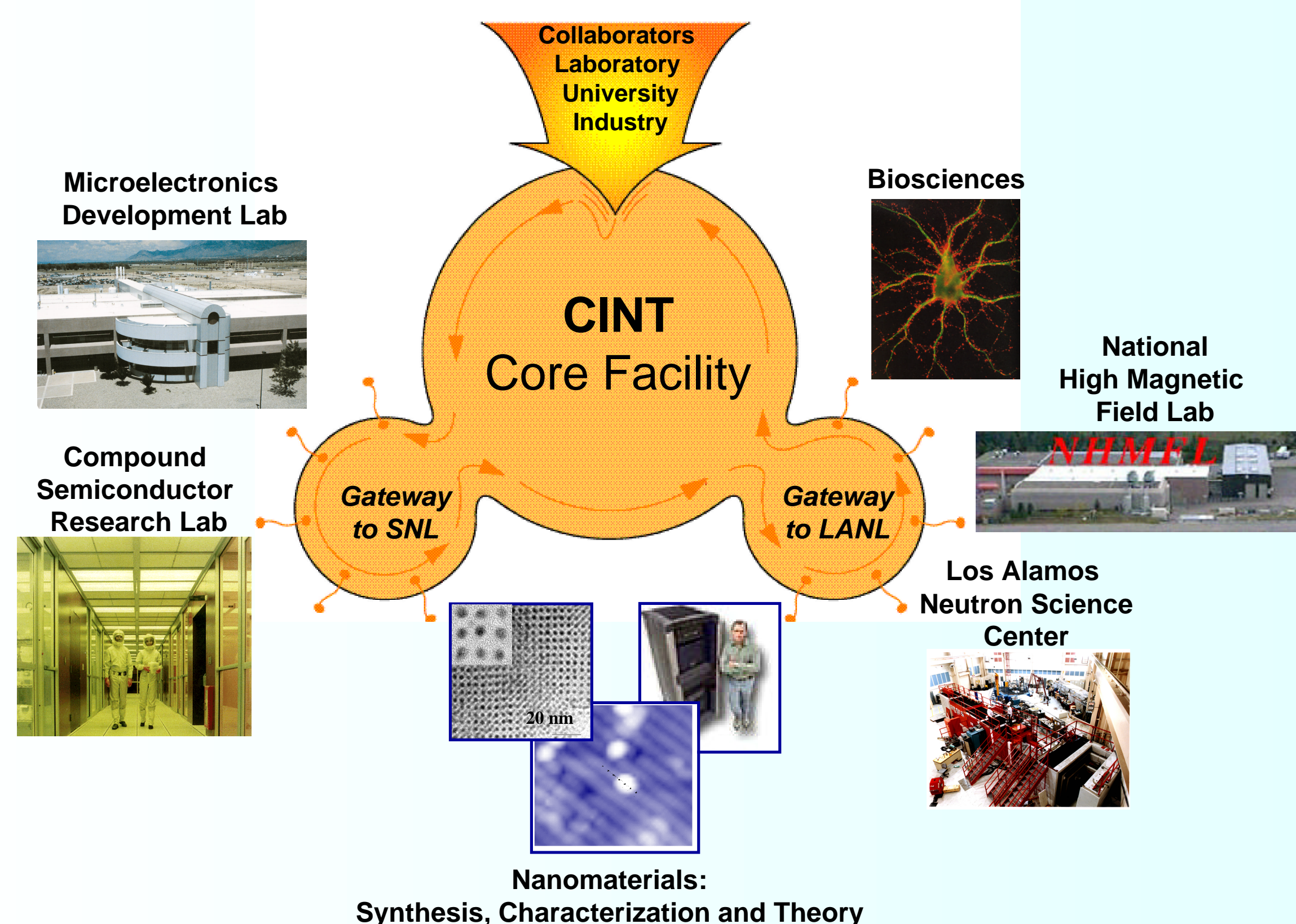


Jointly Operated by Los Alamos and Sandia National Laboratories

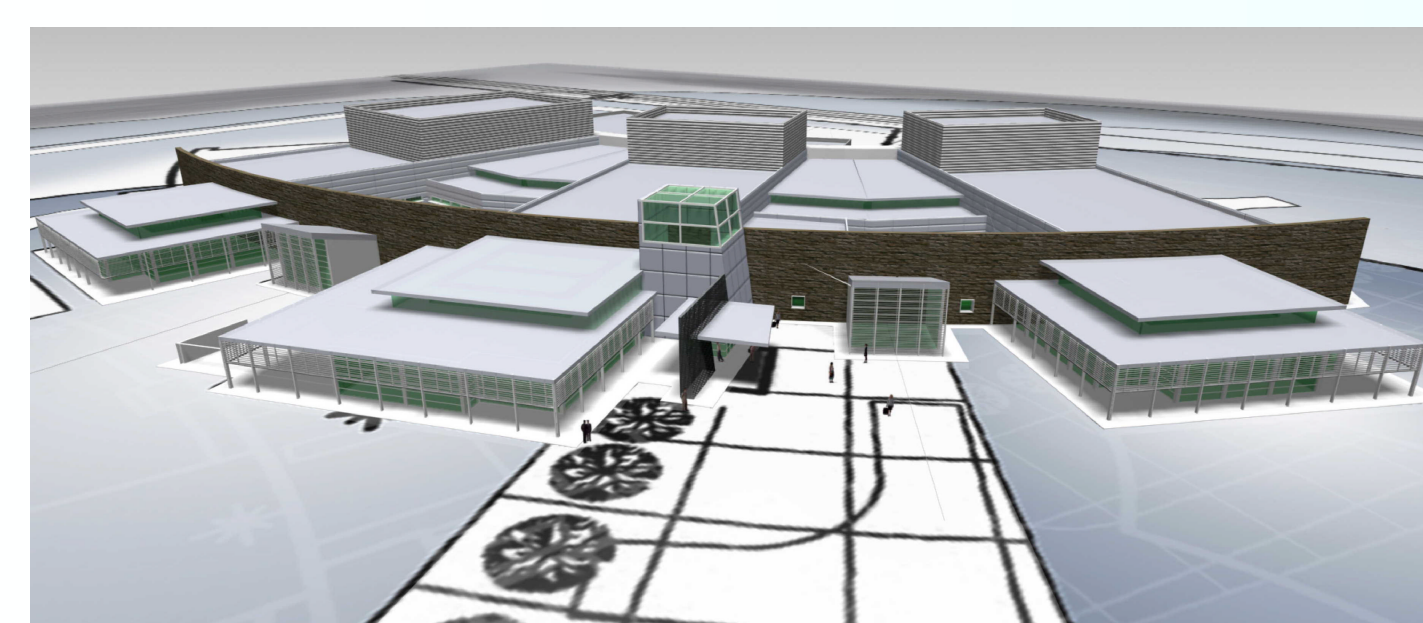


Facilities

CINT is one of five DOE Nanoscale Science Research Centers providing open access to tools & expertise for nanoscience research



The CINT Core Facility will provide common ground for collaboration and integration



90,000 gross sq. ft.

Core Facility Features

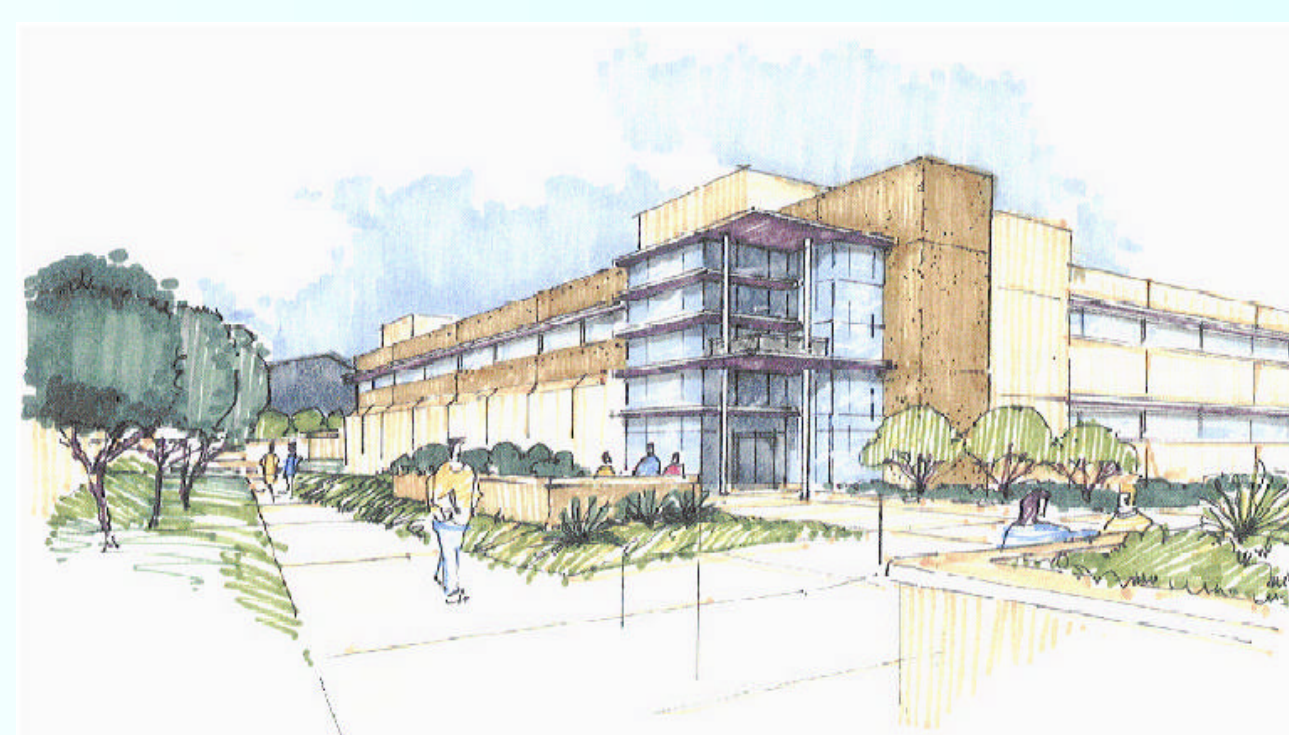
- Low vibration for sensitive characterization
- Chemical/biological synthesis labs
- Clean room for device integration
- Interaction areas & conference rooms
- Visitor office space
- High-speed communications

SNL and LANL have key assets and national user facilities that will be made readily available through Gateway Facilities



CINT Gateway to Sandia will focus on nanomaterials & microfabrication from the existing IMRL facility

CINT Gateway to Los Alamos will focus on biosciences & nanomaterials from a new facility



31,000 gross sq. ft.

National User Facility Program

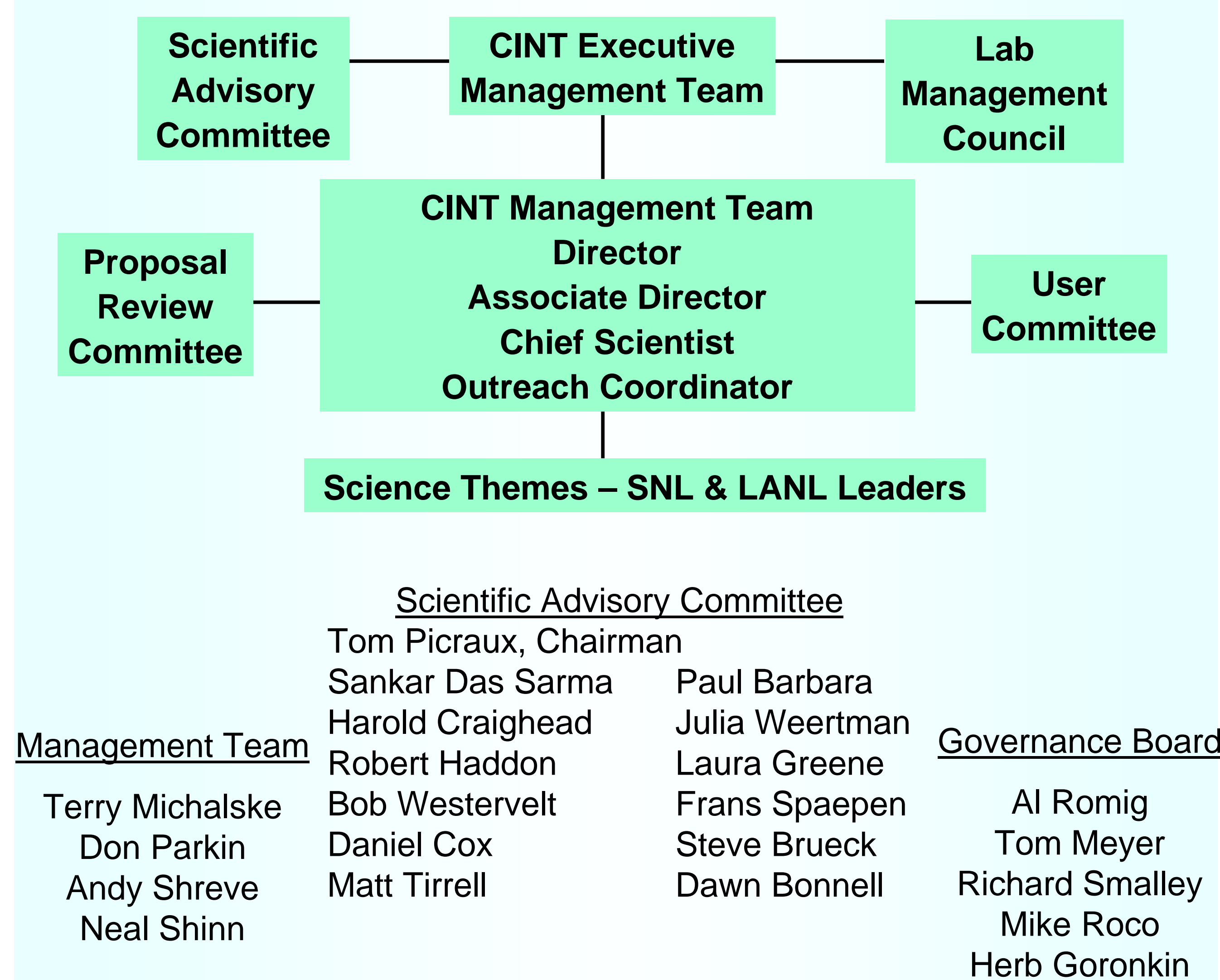
CINT invites user participation from all research sectors

- **Universities**
 - Postdocs, students and visiting faculty/ researchers will comprise a major part of the CINT program.
- **Industry**
 - Open and Proprietary proposal mechanism.
- **National and Federal Laboratories**
 - Other DOE, Federal and DOE NSRC facilities.
- **International Science Community**
 - Open to the international science community

Key Aspects of User Program

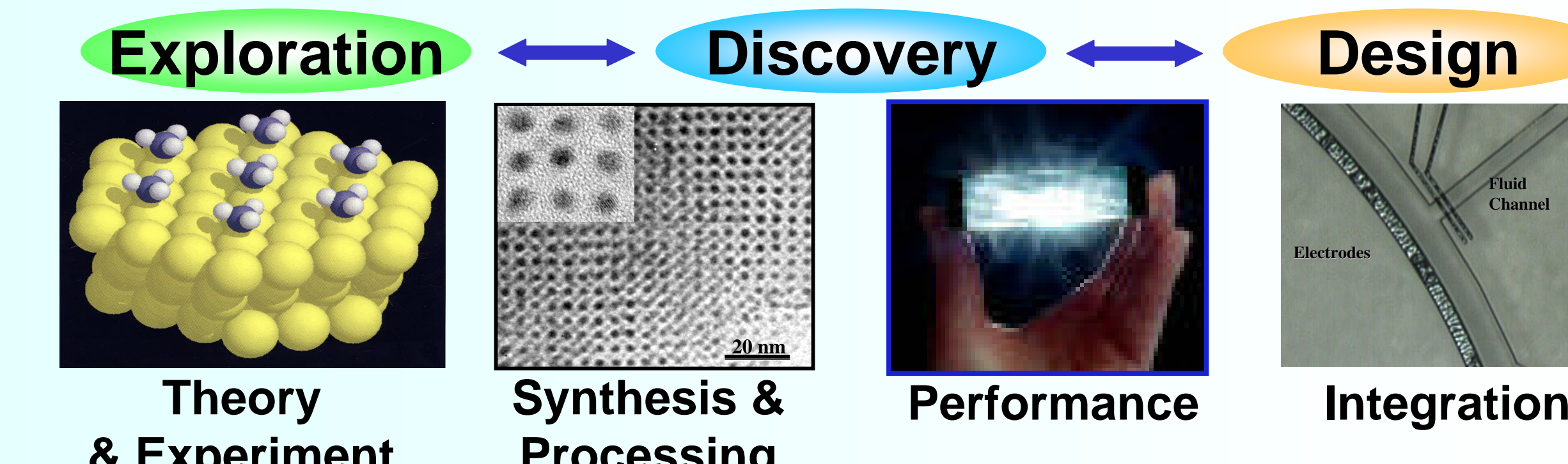
- Open, no cost access to facilities based on scientific quality and CINT capabilities
- Spectrum of user modes
 - Access to equipment
 - Collaborative research
- External evaluation of proposals
- Special help for first time users
- Mechanisms for proprietary work
- User program jump-start in FY03
- Full operating program in FY06

Organizational Structure



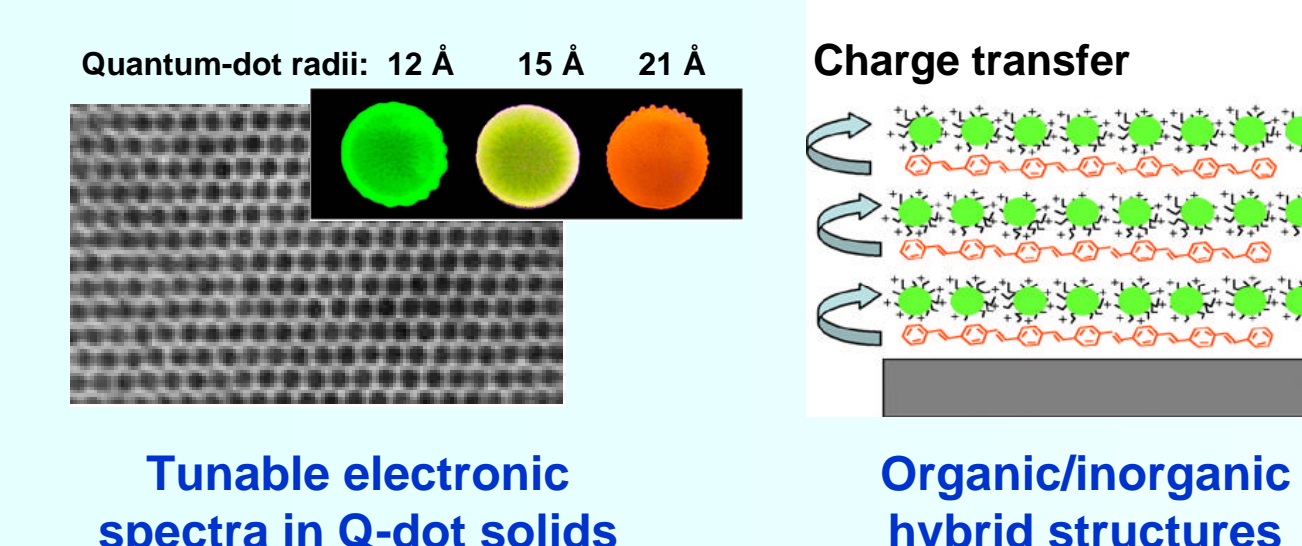
Science Vision

CINT is devoted to establishing the scientific principles that govern the design, performance & integration of nanoscale materials

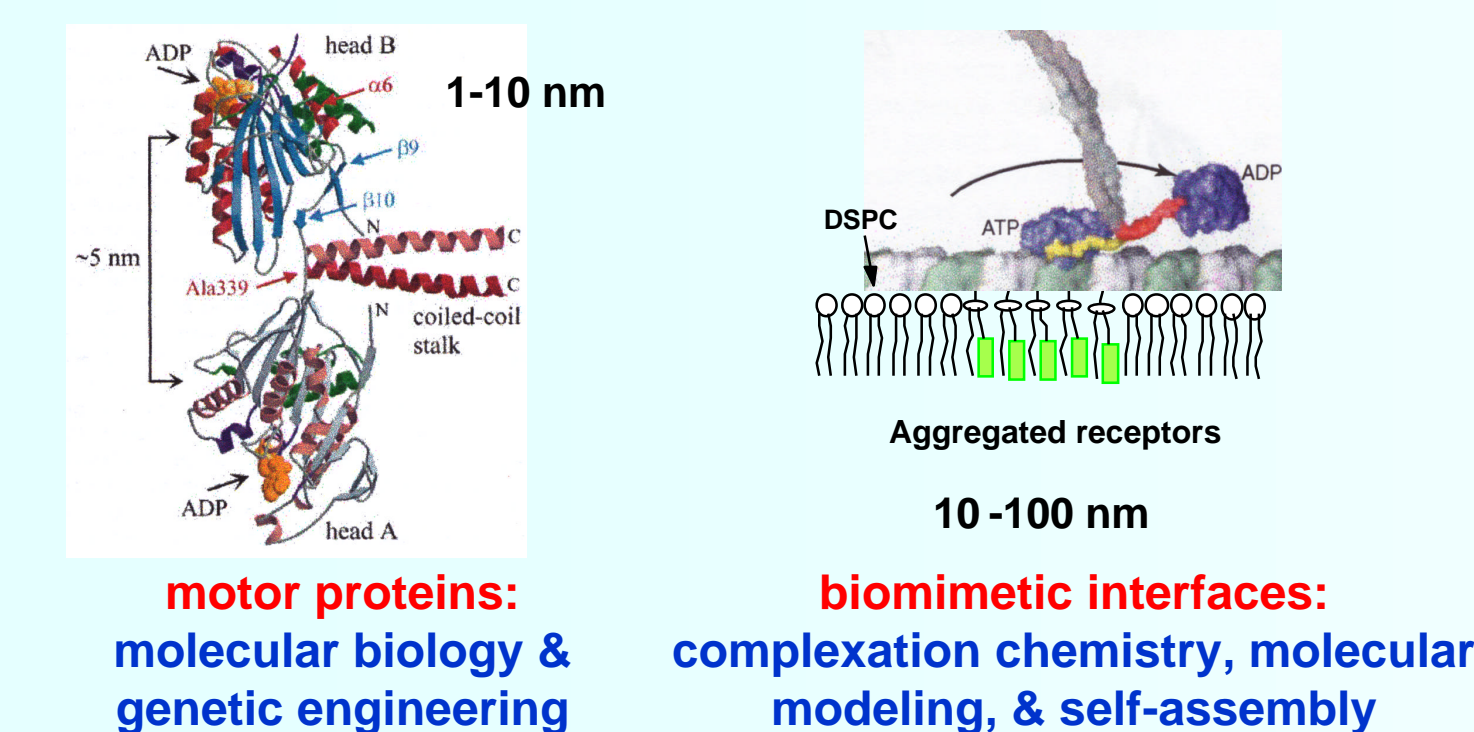


CINT's five scientific thrusts capitalize on the expertise and capabilities of Los Alamos & Sandia

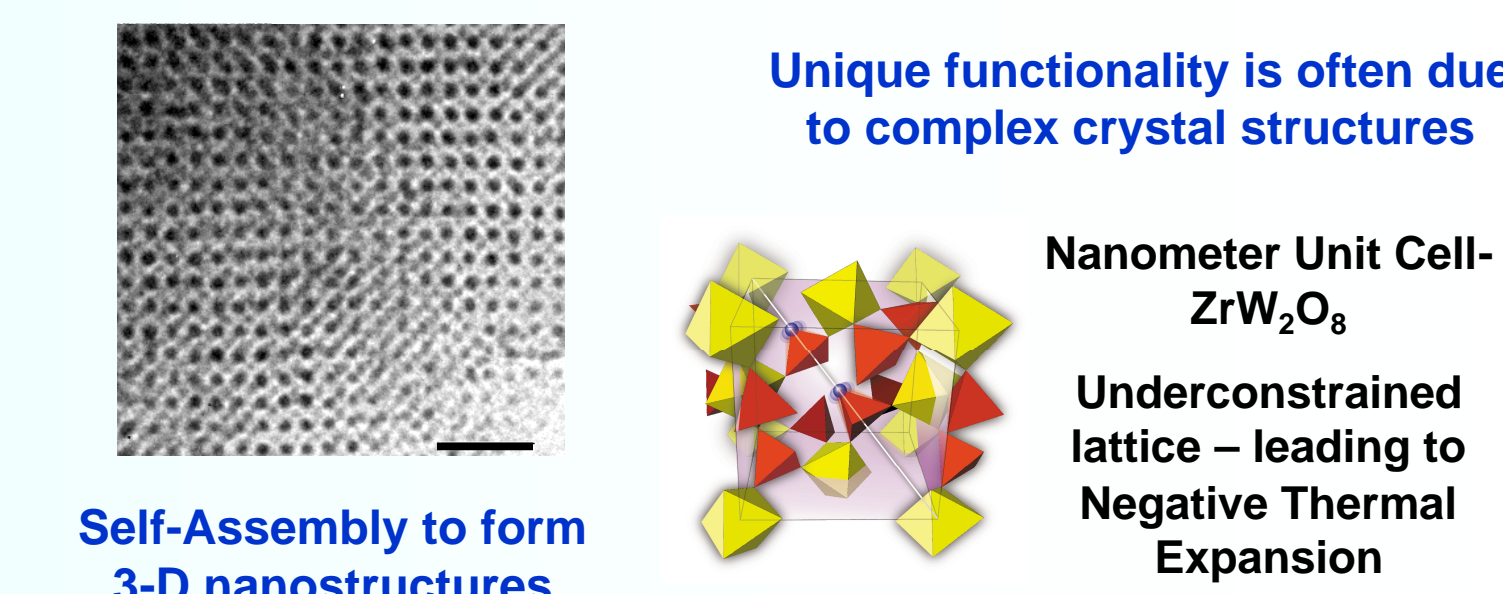
Nanoelectronics & Nanophotonics: Precise control of electronic and photonic wavefunctions



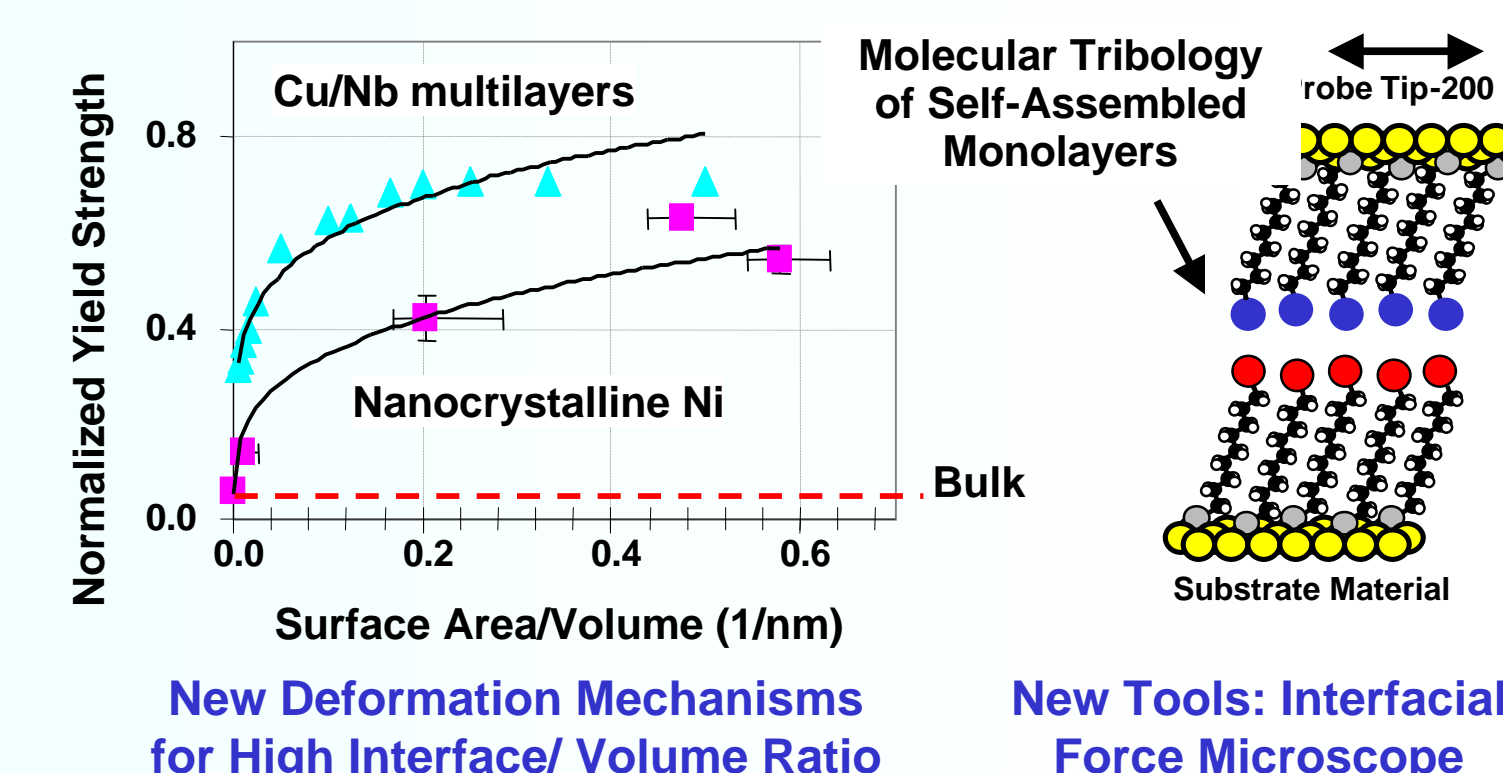
Nano-Bio-Micro Interfaces: Biological principles & functions imported into artificial bio-mimetic systems



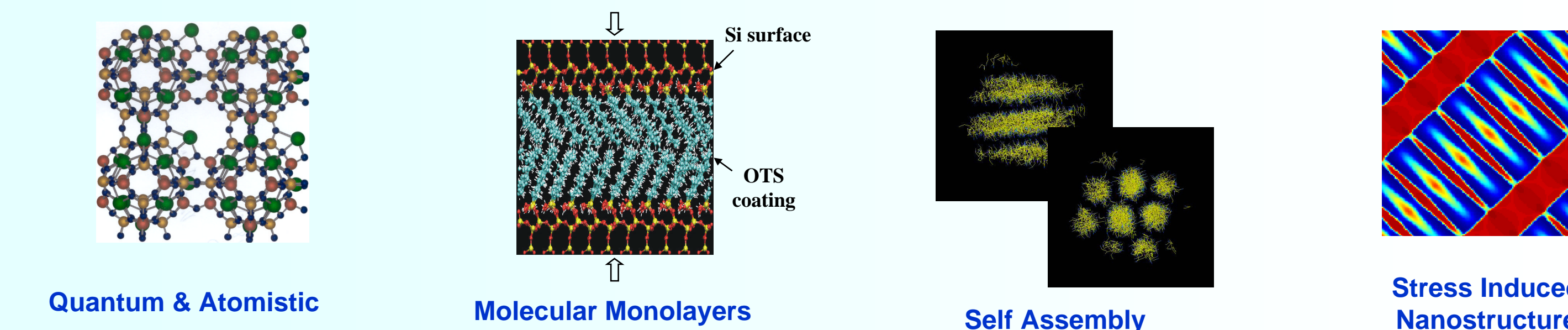
Complex Functional Nanomaterials: Relationships between synthesis, structure and complex and emergent properties



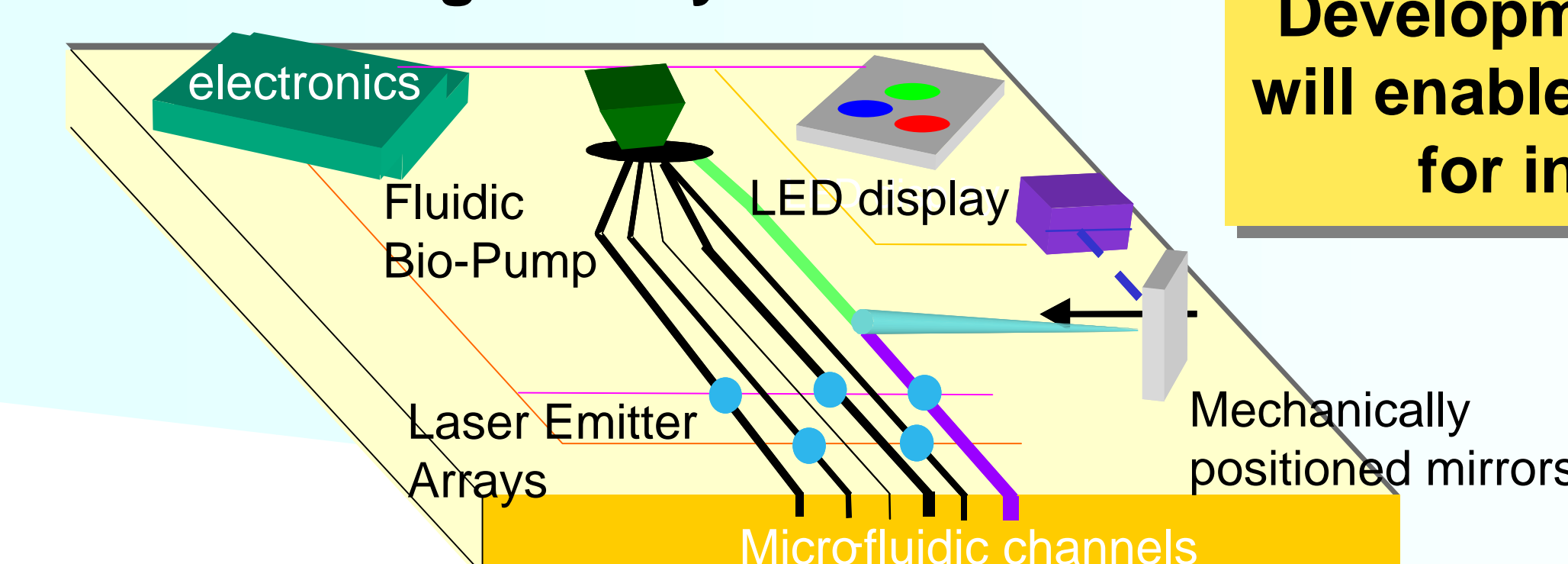
Nanomechanics: Understanding the mechanical behavior of nanostructured materials



Theory & Simulation: Theoretical, modeling and simulation techniques for multiple length and time scales and functionality



Model integrated system



Developments in all theme areas will enable science breakthroughs for integrated solutions